

TEAC

SERVICE MANUAL

PD-H300C

Compact Disc Player

NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components.
They must be replaced with identical components- refer to the appropriate parts list and ensure exact replacement.
- Parts of [] mark can be used only with the version designated.
[DM]: JAPAN [T/C]: U.S.A, CANADA
[EUR]: EUROPE [UK]: UK

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Specifications

Laser System	: 3-beam laser	Power Consumption	: 9W [EUR]
Digital Filter	: 8-times oversampling		8W [DM]
Frequency Response	: 20-20,000Hz(±2dB)	Dimensions (W×H×D)	: 285×131×292mm
Error Correction Method	: Cross Interleave Reed-Solomon code	Weight	: 3.9Kg
S/N Ratio	: More than 100dB	Standard accessories	
	(IHF "A" Filter used)	Remote control cord.....	1
T.H.D	: Less than 0.02% (1KHz)	Signal cord.....	1
Output Voltage	: 2V RMS		
Power requirements	: 230V, 50Hz [EUR]		
	100V, 50Hz [DM]		

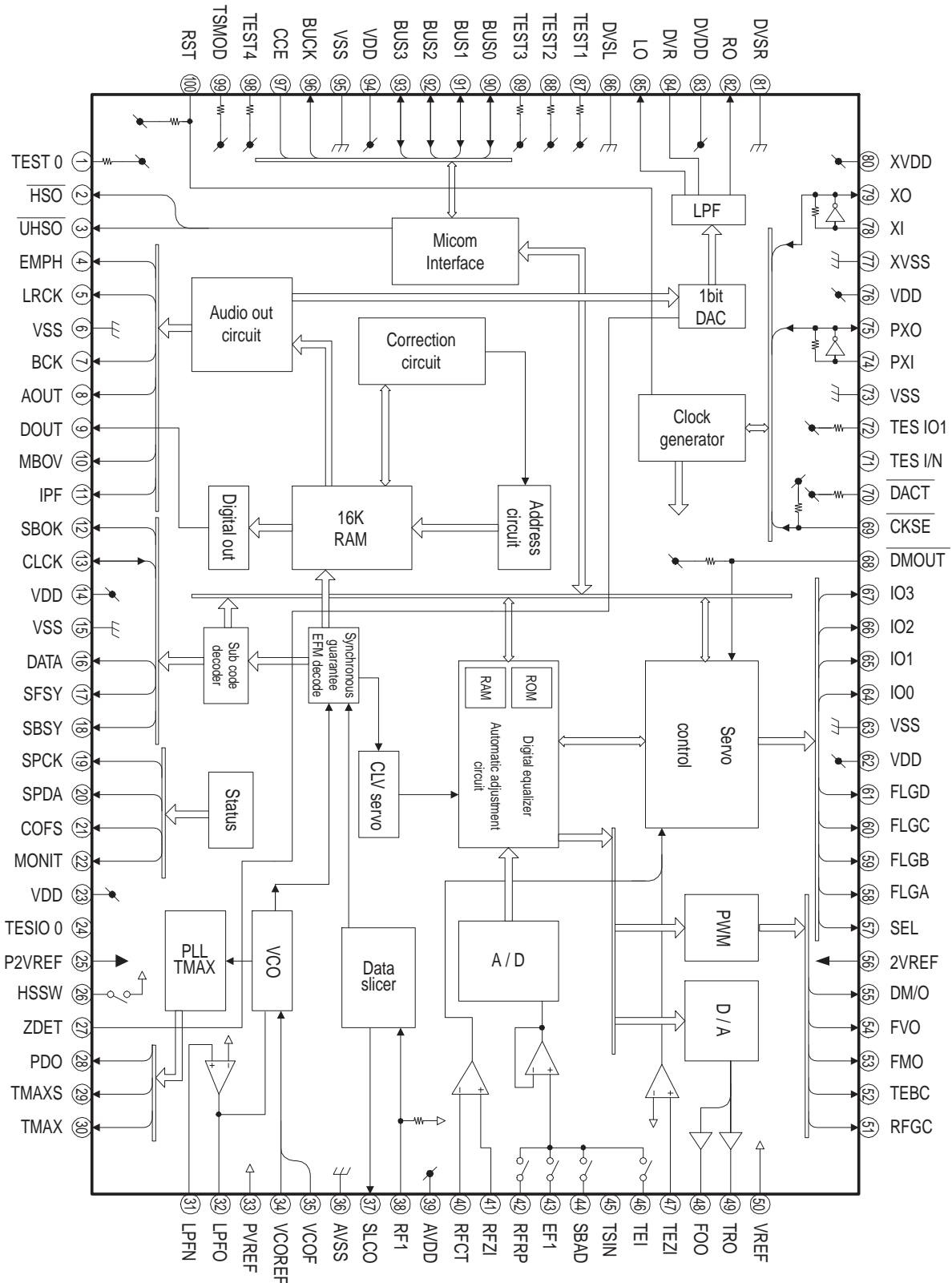
* Improvements may result in specification or feature changes without notice.

TC9432AF/ TC9462AF (Digital Signal Processor)

PIN No.	NAME	I/O	FUNCTIONAL DESCRIPTION	REMARKS															
1	TEST0	-	Test mode terminal. Normally, keep at open.	With pull-up resistor.															
2	$\overline{\text{HSO}}$	O	Playback speed mode flag output terminal. <table><tr><td>$\overline{\text{UHSO}}$</td><td>$\overline{\text{HSO}}$</td><td>PLAYBACK SPEED</td></tr><tr><td>H</td><td>H</td><td>Normal</td></tr><tr><td>H</td><td>L</td><td>2 times</td></tr><tr><td>L</td><td>H</td><td>4 times</td></tr><tr><td>L</td><td>L</td><td>-</td></tr></table>	$\overline{\text{UHSO}}$	$\overline{\text{HSO}}$	PLAYBACK SPEED	H	H	Normal	H	L	2 times	L	H	4 times	L	L	-	-
$\overline{\text{UHSO}}$	$\overline{\text{HSO}}$	PLAYBACK SPEED																	
H	H	Normal																	
H	L	2 times																	
L	H	4 times																	
L	L	-																	
3	$\overline{\text{UHSO}}$	O																	
4	EMPH	O	Subcode Q data emphasis flag output terminal. Emphasis ON at “H” level and OFF at “L” level. The output polarity can invert by command.	-															
5	LRCK	O	Channel clock output terminal. (44.1 kHz) L-ch at “L” level and R-ch at “H” level. The output polarity can invert by command.	-															
6	Vss	-	Digital GND terminal.	-															
7	BCK	O	Bit clock output terminal. (1.4112 MHz)	-															
8	AOUT	O	Audio data output terminal.	-															
9	DOUT	O	Digital data output terminal.	-															
10	MBOV	O	Buffer memory over signal output terminal. Over at “H” level.	-															
11	IPF	O	Correction flag output terminal. At “H ” level, AOUT output is made to correction impossibility by C2 correction processing.	-															
12	SBOK	O	Subcode Q data CRCC check adjusting result output terminal. The adjusting result is OK at “H” level.	-															
13	CLCK	I/O	Subcode P-W data readout clock input/output terminal. This terminal can select by command bit.	-															
14	VDD	-	Digital power supply voltage terminal.	-															
15	Vss	-	Digital GND terminal.	-															
16	DATA	O	Subcode P-W data output terminal.	-															
17	SFSY	O	Playback frame sync signal output terminal.	-															
18	SBSY	O	Subcode block sync signal output terminal.	-															
19	SPCK	O	Processor status signal readout clock output terminal.	-															
20	SPDA	O	Processor status signal output terminal.	-															
21	COFS	O	Correction frame clock output terminal. (7.35 kHz)	-															
22	MONIT	O	Internal signal (DSP internal flag and PLL clock) output terminal. Selected by command.	-															
23	VDD	-	Digital power supply voltage terminal.	-															
24	TESIO0	I	Test input/output terminal. Normally, keep at “L” level.	-															
25	P2VREF	-	PLL double reference voltage supply terminal.	-															
26	HSSW	O	2/4 times speed at “VREF” voltage.	2-state output (PVREF,HiZ)															
27	ZDET	O	1 bit DA converter zero detect flag output terminal.	-															
28	PDO	O	Phase difference signal output terminal of EFM signal and PLCK signal.	3-state output (P2VREF,PVREF,Vss)															
29	TMAXS	O	TMAX detection result output terminal. Selected by command bit (TMPS).	-															
30	TMAX	O	TMAX detection result output terminal. Selected by command bit (TMPS). <table><tr><td>DIFFERENCE RESULT</td><td>TMAX OUTPUT</td></tr><tr><td>Longer than fixed ferq.</td><td>“ P2VREF ”</td></tr><tr><td>Shorter than fixed freq.</td><td>“ Vss ”</td></tr><tr><td>Within the fixed freq.</td><td>“ HiZ ”</td></tr></table>	DIFFERENCE RESULT	TMAX OUTPUT	Longer than fixed ferq.	“ P2VREF ”	Shorter than fixed freq.	“ Vss ”	Within the fixed freq.	“ HiZ ”	3-state output (P2VREF,HiZ,Vss)							
DIFFERENCE RESULT	TMAX OUTPUT																		
Longer than fixed ferq.	“ P2VREF ”																		
Shorter than fixed freq.	“ Vss ”																		
Within the fixed freq.	“ HiZ ”																		

PIN No.	NAME	I/O	FUNCTIONAL DESCRIPTION	REMARKS
31	LPFN	I	LPF amplifier inverting input terminal for PLL.	Analog input.
32	LPFO	O	LPF amplifier output terminal for PLL.	Analog output.
33	PVREF	-	PLL reference voltage supply terminal.	-
34	VCOREF	I	VCO center frequency reference level terminal. Normally, keep at "PVREF" level.	-
35	VCOF	O	VCO filter terminal.	Analog output.
36	AVSS	-	Analog GND terminal.	-
37	SLCO	O	Data slice level output terminal.	Analog output.
38	RFI	I	RF signal input terminal.	Analog input (Zin : selected by command)
39	AVDD	-	Analog power supply voltage terminal.	-
40	RFCT	I	RFRP signal center level input terminal.	Analog input (Zin : 50k Ω)
41	RFZI	I	RFRP zero cross input terminal.	Analog input.
42	RFRP	I	RF ripple signal input terminal.	Analog input.
43	FEI	I	Focus error signal input terminal.	Analog input.
44	SBAD	I	Sub-beam adder signal input terminal.	Analog input.
45	TSIN	I	Test input terminal. Normally, keep at "VREF" level.	Analog input.
46	TEI	I	Tracking error signal input terminal. Track in at tracking servo on.	Analog input.
47	TEZI	I	Tracking error zero cross input terminal.	Analog input (Zin : 10k Ω)
48	FOO	O	Focus servo equalizer output terminal.	Analog output (2VREF~AVSS)
49	TRO	O	Tracking servo equalizer output terminal.	
50	VREF	-	Analog reference voltage supply terminal.	-
51	RFGC	O	RF amplitude adjustment control signal output terminal.	3-state PWM signal output. (2VREF, VREF, VSS) (PWM carrier = 88.2 kHz)
52	TEBC	O	Tracking balance control signal output terminal.	
53	TEBC	O	Feed equalizer output terminal.	
54	TEBC	O	Speed error signal or feed search equalizer output terminal.	
55	DMO	O	Disk equalizer output terminal. (PWM carrier = 88.2 kHz for DSP, Synchronize to PXO)	3-state PWM signal output.(2VREF, VREF, VSS)
56	2VREF	-	Analog double reference voltage supply terminal.	-
57	SEL	O	APC circuit ON/OFF indication signal output terminal. At the laser on time, UHF = L at "HiZ" level and UHF = H at "H" level.	-
58	FLGA	O	External flag output terminal for internal signal. Can select signal from TEZC, FOON, FOK and RFZC by command.	-
59	FLGB	O	External flag output terminal for internal signal. Can select signal from DECT, FOON, FMON and RFZC by command.	-
60	FLGC	O	External flag output terminal for internal signal. Can select signal from TRON, TRSR, FOK and SRCH by command.	-
61	FLGD	O	External flag output terminal for internal signal. Can select signal from TRON, DMON, HYS and SHC by command.	-
62	VDD	-	Digital power supply voltage terminal.	-
63	VSS	-	Digital GND terminal.	-
64	IO0	I/O	General I/O terminal. Can change over input port or output port by command. At the input mode time can readout a state of terminal (H/L) by read command. At the output mode time can control a state of terminal (H/L/HiZ) by command.	-
65	IO1			
66	IO2			
67	IO3			

PIN No.	NAME	I/O	FUNCTIONAL DESCRIPTION	REMARKS
68	$\overline{\text{DMOUT}}$	I	This terminal controls IO0-IO3 terminal. At "L" level time, IO0, 1 out feed equalizer signal of 2-state PWM. IO2, 3 out disk equalizer signal of 2-state PWM.	With pull-up resistor.
69	$\overline{\text{CKSE}}$	I	Normally, keep at open.	With pull-up resistor.
70	$\overline{\text{DACT}}$	I	DAC test mode terminal. Normally, keep at open.	With pull-up resistor.
71	TESIN	I	Test input terminal. Normally, keep at "L" level.	Analog input.
72	TESIO1	I	Test input/output terminal. Normally, keep at "L" level.	Analog input.
73	Vss	-	Digital GND terminal.	-
74	PXI	I	Crystal oscillator connecting input terminal for DSP. Normally, keep at "L" level.	-
75	PXO	O	Crystal oscillator connecting output terminal for DSP.	
76	VDD	-	Digital power supply voltage terminal.	-
77	XVss	-	Oscillator GND terminal for system clock.	-
78	XI	I	Crystal oscillator connecting input terminal for system clock.	-
79	XO	O	Crystal oscillator connecting output terminal for system clock.	-
80	XVDD	-	Oscillator power supply voltage terminal for system clock.	-
81	DVSR	-	Analog GND terminal for DA converter. (R-ch)	-
82	RO	O	R channel data forward output terminal.	-
83	DVDD	-	Analog supply voltage terminal for DA converter.	-
84	DVR	-	Reference voltage terminal for DA converter.	-
85	LO	O	L channel data forward output terminal.	-
86	DVSL	-	Analog GND terminal for DA converter. (L-ch)	-
87	TEST1	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
88	TEST2	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
89	TEST3	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
90	BUS0	I/O	Micom interface data input/output terminal.	Schmit input. With pull-up resistor.
91	BUS1	I/O		
92	BUS2	I/O		
93	BUS3	I/O		
94	VDD	-	Digital Ppower supply voltage terminal.	-
95	Vss	-	Digital GND terminal.	-
96	BUCK	I	Micom interface clock input terminal.	Schmit input.
97	$\overline{\text{CCE}}$	I	Command and data sending/receiving chip enable signal input terminal. The bus line becomes active at "L" level.	Schmit input.
98	TEST4	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
99	$\overline{\text{TSMOD}}$	I	Local test mode selection terminal.	With pull-up resistor.
100	$\overline{\text{RST}}$	I	Reset signal input terminal. Reset at "L" level.	With pull-up resistor.

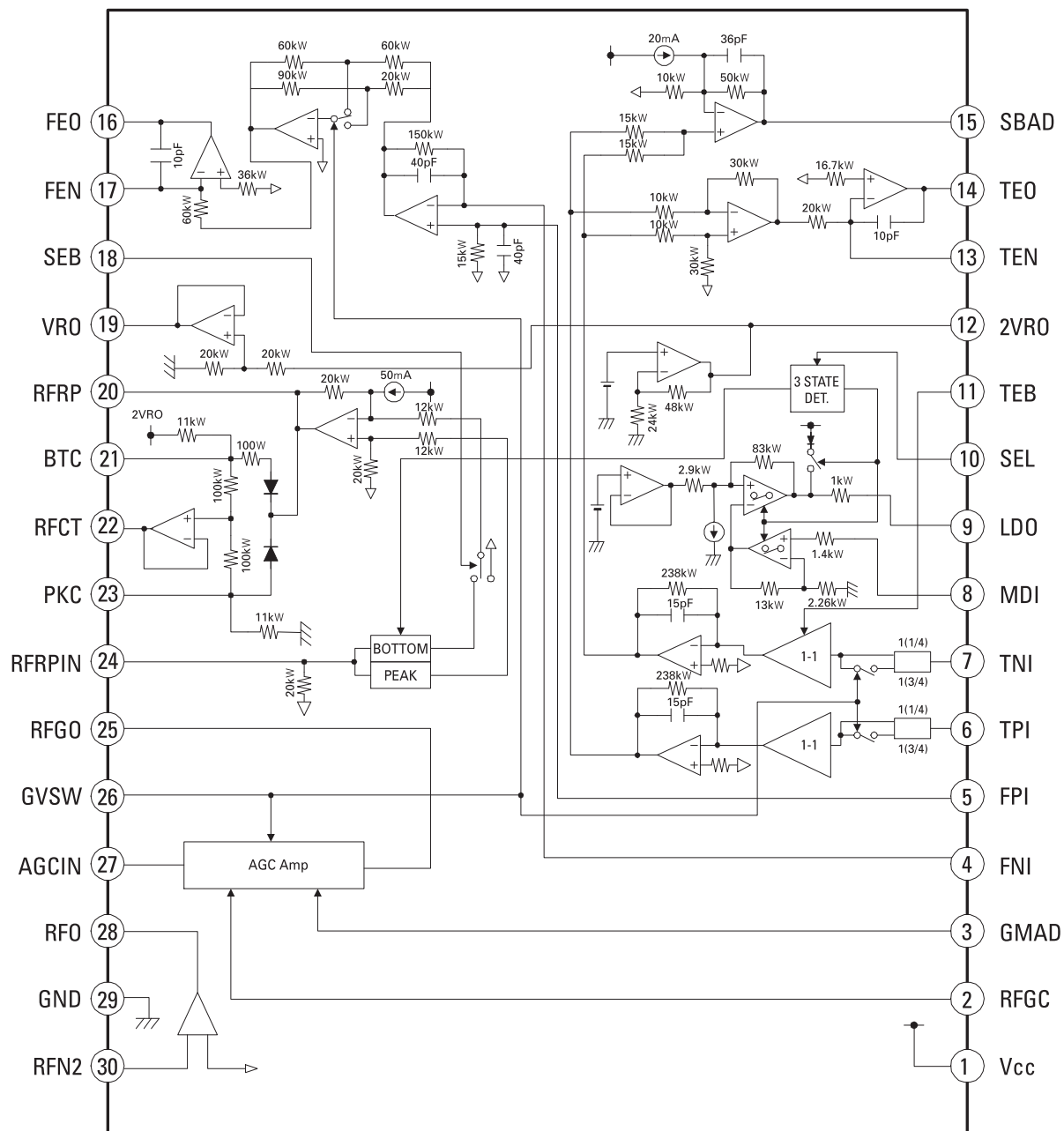


TA2150FN

PIN No.	SYMBOL	I/O	FUNCTION DESCRIPTION	REMARKS																
1	VCC	-	Power supply input terminal.	-																
2	RFGC	I	RF amplitude adjustment control signal input terminal. Controlled by 3-PWM signals. (PWM carrier = 88.2kHz)	3 signals input. (2VRO, VRO, GND)																
3	GMAD	I	Open loop gain adjustment terminal for AGC amp.	(Note 1)																
4	FNI	I	Main beam I-V amp input terminal.	Connected to pin diode output B + D (through resistor)																
5	FPI	I	Main beam I-V amp input terminal.	Connected to pin diode output A + C (through resistor)																
6	TPI	I	Sub beam I-V amp input terminal.	Connected to pin diode output F.																
7	TNI	I	Sub beam I-V amp input terminal.	Connected to pin diode output E.																
8	MDI	I	Monitor photo diode amp input terminal.	Connected to pin monitor photo diode.																
9	LDO	O	Laser diode amp input terminal.	Connected to laser diode control circuit.																
10	SEL	I	Laser diode control signal input terminal and APC circuit ON/OFF control signal terminal. <table><tr><td>SEL LEVEL</td><td>APC CIRCUIT</td><td>LDO</td><td>DETECT FREQUENCY</td></tr><tr><td>GND</td><td>OFF</td><td>Connected to Vcc through resistor (1 k Ω)</td><td>Low</td></tr><tr><td>Hiz</td><td>ON</td><td>Control signal output</td><td>Low</td></tr><tr><td>Vcc</td><td>ON</td><td>Control signal output</td><td>High</td></tr></table>	SEL LEVEL	APC CIRCUIT	LDO	DETECT FREQUENCY	GND	OFF	Connected to Vcc through resistor (1 k Ω)	Low	Hiz	ON	Control signal output	Low	Vcc	ON	Control signal output	High	3 signals input. (Vcc, Hiz, GND)
SEL LEVEL	APC CIRCUIT	LDO	DETECT FREQUENCY																	
GND	OFF	Connected to Vcc through resistor (1 k Ω)	Low																	
Hiz	ON	Control signal output	Low																	
Vcc	ON	Control signal output	High																	
11	TEB	I	Tracking error balance adjustment signal input terminal. Controlled by 3-PWM signal. (PWM carrier = 88.2 kHz)	3 signals input (2VRO, VRO, GND)																
12	2VRO	O	Reference voltage (2VRO) output terminal. 2VRO = 4.2 V when Vcc = 5 V	-																
13	TEN	I	TE amp negative input terminal.	Connected to TEO through feedback resistor.																
14	TEO	O	TE error signal output terminal.	-																
15	SBAD	O	Sub beam adder signal output terminal.	-																
16	FEO	O	Focus error signal output terminal.	-																
17	FEN	I	FE amp negative input terminal.	Connected to FEO through feedback resistor.																
18	SEB	I	RFRP output circuit switching terminal. <table><tr><td>SEB LEVEL</td><td>BOTTOM DETECTION</td><td>PEAK DETECTION</td></tr><tr><td>GND</td><td>GND</td><td>GND</td></tr><tr><td>GND</td><td>GND</td><td>GND</td></tr></table>	SEB LEVEL	BOTTOM DETECTION	PEAK DETECTION	GND	GND	GND	GND	GND	GND	Low (GND) is for normal use.							
SEB LEVEL	BOTTOM DETECTION	PEAK DETECTION																		
GND	GND	GND																		
GND	GND	GND																		

TA2150FN

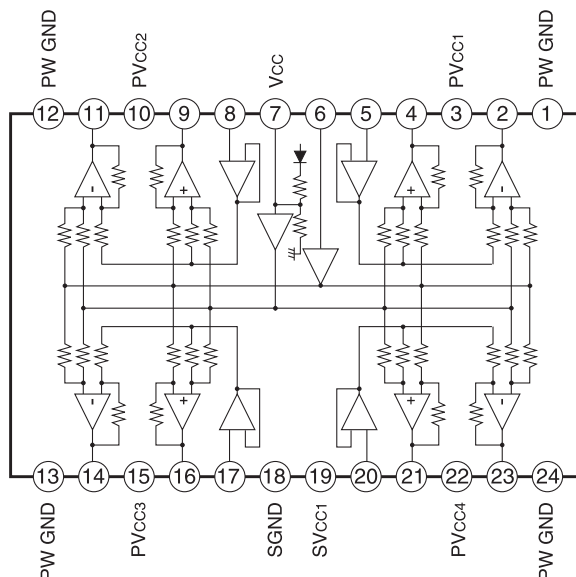
PIN No.	SYMBOL	I/O	FUNCTION DESCRIPTION	REMARKS								
19	VRO	O	Reference signal (VRO) output terminal. VRO = 2.1 V when Vcc = 5 V	-								
20	RFRP	O	Track count signal output terminal.	-								
21	BTC	I	Time constant adjustment terminal for bottom detection.	Adjusted by capacitance.								
22	RFCT	O	RFRP signal center level output terminal.	-								
23	PKC	I	Time constant adjustment terminal for peak detection.	Adjusted by capacitance.								
24	RFRPIN	I	Input terminal for track count signal output amp.	-								
25	RFGO	O	Output terminal for RF signal amplitude adjustment amp.	-								
26	GVSW	I	Amp (AGC, FE, TE) gain switching terminal. <table><tr><td>GVSW</td><td>MODE</td></tr><tr><td>GND</td><td>CD-RW</td></tr><tr><td>Hiz</td><td>Normal</td></tr><tr><td>Vcc</td><td>Normal</td></tr></table>	GVSW	MODE	GND	CD-RW	Hiz	Normal	Vcc	Normal	Low (GND) is for 5 times gain.
GVSW	MODE											
GND	CD-RW											
Hiz	Normal											
Vcc	Normal											
27	AGCIN	I	Input terminal for RF signal amplitude adjustment amp.	Connected to RFO through capacitance.								
28	RFO	O	Output terminal RF signal amp.	-								
29	GND	-	Ground terminal.	-								
30	RFN2	I	input terminal for RF signal amp.	Connected to pin-diode output A + B + C + D (through resistor).								



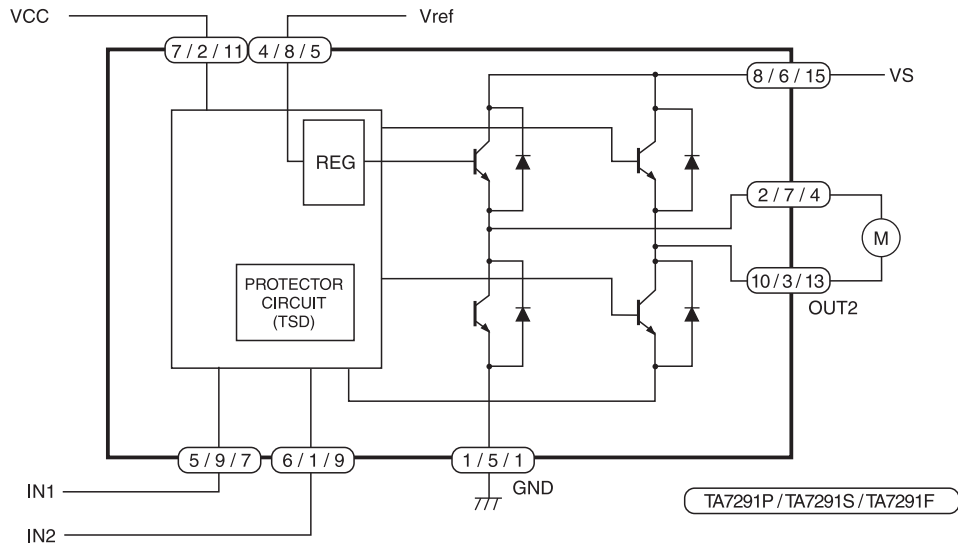
TA2092N (POWER DRIVER)

PIN No.	NAME	DESCRIPTION
1	PW GND	Power GND Connected to substrate. ① , ⑫ , ⑬ , ⑳ pin are connected inside.
2	OUT (-) 1	Inverted output for CH1
3	PVCC1	Supply terminal of output stage for CH1 Supply terminal of output stage are not connected to other channel terminal.
4	OUT (+) 1	Non-inverted output for CH1
5	VIN1	Input for CH1. Not biased inside
6	VRI	Input reference voltage Under condition of $V_{RI} \leq 1.8V$, internal bias circuit is shut off. No signal input condition : $V_{RI} = V_{IN}$
7	VCI	Output reference voltage. $V_{OUT} = V_{CI} = (V_{CC} - V_F)/2$
8	VIN2	Input for CH2
9	OUT (+) 2	Non-inverted output for CH2
10	PVCC2	Supply terminal of output stage for CH2
11	OUT (-) 2	Inverted output for CH2
12	PW GND	Power GND
13	PW GND	Power GND
14	OUT (-) 3	Inverted output for CH3
15	PVCC3	Supply terminal of output stage for CH3
16	OUT (+) 3	Non-inverted output for CH3
17	VIN3	Input for CH3
18	S GND	Supply terminal of small signal GND
19	S Vcc	Small signal GND
20	VIN4	Input for CH4
21	OUT (+) 4	Non-inverted output for CH4
22	PVCC4	Supply terminal of output stage for CH4
23	OUT (-) 4	Inverted output for CH4
24	PW GND	Power GND

BLOCK DIAGRAM



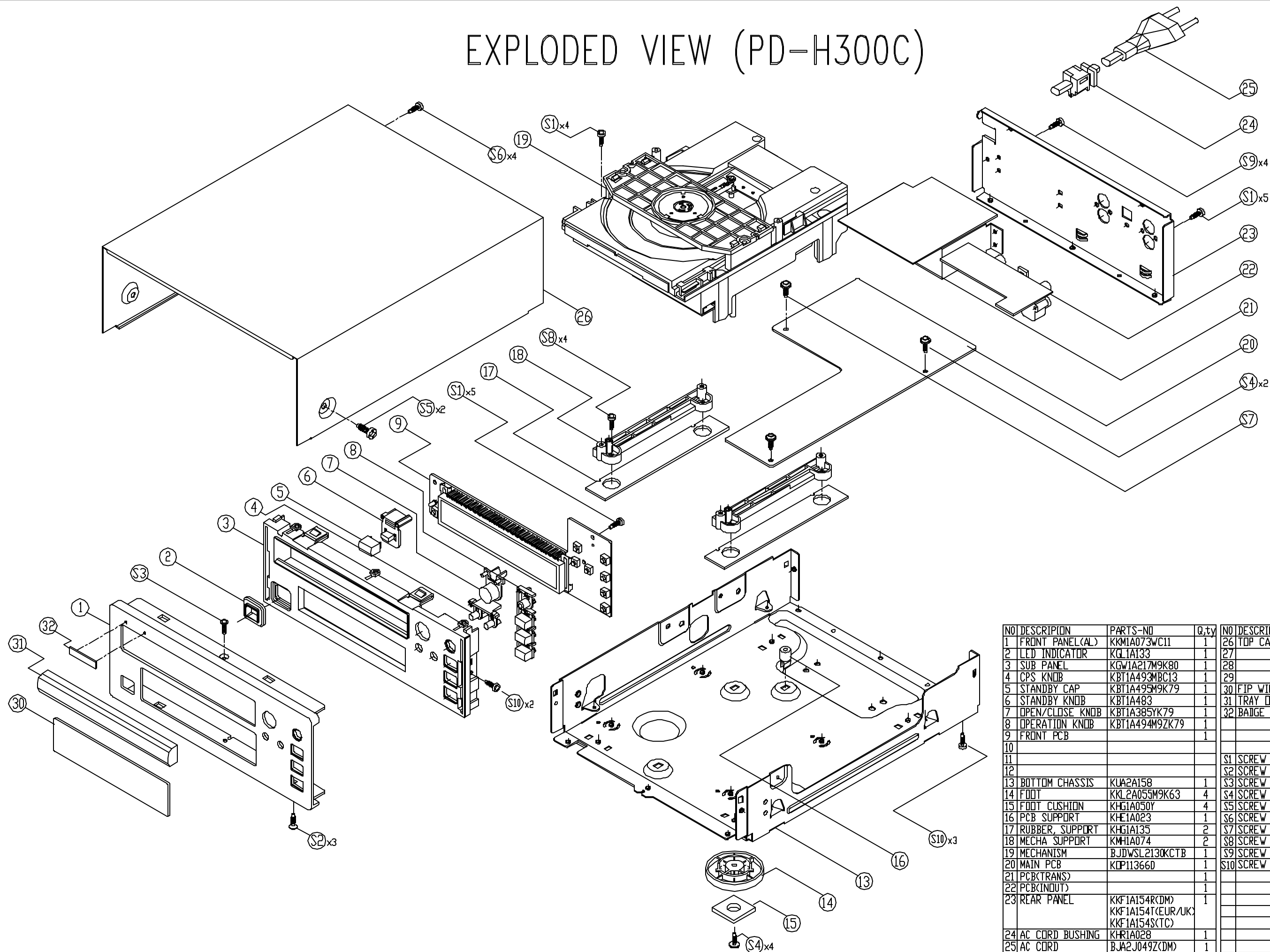
TA7291S (Bridge Driver)



PIN No.		SYMBOL	FUNCTIONAL DESCRIPTION
P	S		
7	2	Vcc	Supply voltage terminal for Logic
8	6	Vs	Supply voltage terminal for motor drive
4	8	Vref	Supply voltage terminal for control
1	5	GND	GND terminal
5	9	IN1	Input terminal
6	1	IN2	Input terminal
2	7	OUT1	Output terminal
10	3	OUT2	Output terminal

- P Type : PIN ③, ⑨ : NC
- S Type : PIN 4 : NC
- F Type : PIN ②, ③, ⑥, ⑧, ⑩, ⑫, ⑭, and ⑯ : NC
- For F Type, We recommend FIN to be connected to the GND.

EXPLODED VIEW (PD-H300C)



NO	DESCRIPTION	PARTS-NO	Q.ty	NO	DESCRIPTION	PARTS-NO	Q.ty
1	FRONT PANEL(AL)	KKM1A073WC11	1	26	TOP CABINET	KKCLB089S21	1
2	LED INDICATOR	KGL1A133	1	27			
3	SUB PANEL	KGW1A217M9K80	1	28			
4	CPS KNOB	KBT1A493MBC13	1	29			
5	STANDBY CAP	KBT1A495M9K79	1	30	FIP WINDOW	KGUIA154Y	1
6	STANDBY KNOB	KBT1A483	1	31	TRAY ORNAMENT	KGRIA127M9ZK79	1
7	OPEN/CLOSE KNOB	KBT1A385YK79	1	32	BADGE	BGB1A047	1
8	OPERATION KNOB	KBT1A494M9ZK79	1				
9	FRONT PCB		1				
10							
11				S1	SCREW	KTB3+10G	14
12				S2	SCREW	KTS3+6J	3
13	BOTTOM CHASSIS	KUA2A158	1	S3	SCREW	KTS3+8G	1
14	FOOT	KKL2A055M9K63	4	S4	SCREW	KTW3+8J	6
15	FOOT CUSHION	KHG1A050Y	4	S5	SCREW	KTB4+6FFZ	2
16	PCB SUPPORT	KHE1A023	1	S6	SCREW	KTB3+8JFZ	4
17	RUBBER SUPPORT	KHG1A135	2	S7	SCREW	KTW3+16G	1
18	MECHA SUPPORT	KMH1A074	2	S8	SCREW	KHD5A009	4
19	MECHANISM	BJDWSL213KCTB	1	S9	SCREW	KTB3+6F	4
20	MAIN PCB	KDP11366D	1	S10	SCREW	KTB3+6J	5
21	PCB(TRANS)		1				
22	PCB(INPUT)		1				
23	REAR PANEL	KKF1A154R(DM) KKF1A154T(EUR/UK) KKF1A154S(TC)	1				
24	AC CORD BUSHING	KHR1A028	1				
25	AC CORD	BJA2J049Z(DM) BJA2B043Z(EUR) BJA2E045Z(UK) BJA523F(BY(TC)	1				

EXPLODED VIEW LIST

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1	9A08789800	PANEL, FRONT (AL)	KKM1A073WC11
2	9A06863300	INDICATOR, STAND BY	KGL1A133
3	9A07436000	PANEL, SUB	KGW1A217M9K80
4	9A06868300	KNOB, CPS	KBT1A493MBC13
5	9A07287200	CAP, STANBY	KBT1A495M9K79
6	9A06862500	KNOB, STAND BY	KBT1A483
7	9A07431800	KNOB, TACT (OPEN/CLOSE)	KBT1A385YK79
8	9A07287100	KNOB, OPERATION	KBT1A494M9ZK79
9	9A08790100	CD SUB PCB ASS'Y	KOP11368B
13	9A06871600	CHASSIS, BOTTOM	KUA2A158
14	9A06864400	FOOT	KKL2A055M9K63
15	9A05837300	FOOT CUSHION	KHG1A050Y
16	9A06229100	MOUNT, PCB	KHE1A023
17	9A06241400	RUBBER, SUPPORT	KHG1A135
18	9A06870600	SUPPORT, MECHA	KMH1A074
19	9A08788100	CD MECHANISM ASS'Y	BJDWSL2130KCTB
L	9A08788800	CD PICK-UP ASS'Y	HJDKCTB1H
20	9A08790000	CD MAIN PCB ASS'Y	KOP11366DEUR
21	9A08790000	CD MAIN PCB ASS'Y	KOP11366DEUR
22	9A08790000	CD MAIN PCB ASS'Y	KOP11366DEUR
23	9A08789700	PANEL, REAR	KKF1A154T
24	△ 9A06754900	BUSHING, AC CORD	KHR1A028
25	△ 9A08152100	POWER CORD, 2.5A 250V	BJA2B043Z
26	9A06870100	CABINET, TOP	KKC1B089S21
30	9A06240500	WINDOW	KGU1A154Y
31	9A07435900	ORNAMENT, TRAY	KGR1A127M9ZK79
32	9A06224200	BADGE, TEAC	BGB1A047
F101	△ 9A06868100	FUSE	KBA2C0315TLE

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	9A08524200	OWNER'S MNL, EUR	KOX1A620Z
	9A05935900	CORD, PIN	KJS4M014Y
	9A05936000	CORD, PIN	KJS4N001Y

CD MAIN PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	9A08790000	CD MAIN PCB ASS'Y
	9A08790600	CD MAIN PCB
	9A05961500	PLATE, EARTH
	9A05328200	HOLDER, FUSE
	9A05333500	HEAT SINK
	9A08038100	RING, FERRITE
BD01	9A07050600	BEAD, CORE
C208	△ 9A06764800	C, ELECT 100UF/50V
C209	△ 9A05976300	C, ELECT 220UF/35V
C213, 214	△ 9A06226700	C, ELECT 1000UF/25V
C223	△ 9A06764900	C, ELECT 100UF/35V
CN01	9A08220300	WAFER, CARD CABLE
CN02	9A05329700	WAFER, MOLEX53014-0610
CN03	9A05356400	WAFER, MOLEX53014-0510
CN04	9A08789600	WAFER, CARD CABLE
CN05	9A08789500	WAFER, C. CABLE
CN06	9A05331000	WAFER, MOLEX 53014-1210
CN08	9A06674400	WAFER
CN09	9A05967800	WAFER
D102, 103	△ 9A05194600	DIODE, 1N4003SRT
D104	△ 9A05194700	DIODE, 1N4003ST
D105	△ 9A06765100	DIODE, ZENER MTZJ27BT
D106	9A06236200	DIODE, ZENER MTZJ6.2BT
D110, 111	9A01390500	DIODE, 1N4148MT
D112	9A05194600	DIODE, 1N4003SRT
D500-502	9A01390500	DIODE, 1N4148MT
D503	9A06236200	DIODE, ZENER MTZJ6.2BT
D504-509	△ 9A05194600	DIODE, 1N4003SRT
IC01	9A08788500	IC, TA2150FN
IC02	9A08788700	IC, TC9462F
IC03	9A08788400	IC, TA2092N
IC04	9A08788600	IC, TA7291S
IC05	9A06786000	IC, TMP87PM78F
IC09, 10	9A07343300	IC, NJM2068MD-TE1
IC11	△ 9A08788200	IC, NJM7809FA
IC12	△ 9A08788300	IC, NJM7909FA
IC14, 15	△ 9A05341500	IC, KA7805-ABTU
IC21	△ 9A08790800	IC, KA78R08
JK50	9A06869700	JACK, BOARD
JK51	9A06239100	MODULE, OPTICAL
JK52	9A06869800	JACK, IN/OUT (B/B, G)
L102, 103	9A07330400	COIL, AXAIL
L104	9A05356900	COIL, AXAIL 10UH K
Q104, 107	9A08791000	TR, KRA107M
Q108	9A08791100	TR, KRC107M
Q111	9A05196700	TR, KSA916-Y-SHTA
Q112, 113	9A05197400	TR, KTC3203YT
Q114	9A03745100	TR, KSA1175-YTA
Q115	9A03745000	TR, KSC2785-YTA
Q116	9A05895900	TR, KTA1266YT

CD MAIN PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
Q500, 501	9A05197500	TR, KTD1302T
Q502	9A08791000	TR, KRA107M
Q503	9A08791100	TR, KRC107M
Q504	9A03745100	TR, KSA1175-YTA
T101	△ 9A08789900	TRANS, POWER
X101	9A05193100	CRYSTAL
X102	9A05193000	CRYSTAL

CD SUB PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	9A08790100	CD SUB PCB ASS'Y
	9A08790700	CD FRONT PCB
BK01	9A05961600	BRACKET, FLT
BK02	9A07290100	SUPPORT, LED
CN04	9A08789600	WAFER, CARD CABLE
CN05	9A08789500	WAFER, C. CABLE
D101	9A08131100	LED, YELLOW
FIP1	9A07313300	F. I. P. SVA08MS14
S101-108	9A06671200	SW, TACT EVQ21505R

